0 **AMENDMENTS TO THE SPECIFICATION:**

At page 15, line 1, prior to the paragraph starting with "substantially linear ethylene/α-olefin...",
please insert the following:

One factor that influences the overall MWD is the difference between the molecular
5   weights of the HMW component and the LMW component. In some embodiments, the ratio of
the molecular weights of the polymer produced by one catalyst to the molecular weight of the
polymer produced by the other catalyst, M_{wH}/M_{wL} is about 1 to 20.

Another factor that can have a substantial effect on the overall MWD is the "polymer
split" of the composition. A "polymer split" is defined as the weight fraction of the high
10   molecular weight polymer component in a polymer composition. The relative fraction of the
high and low molecular weight components are determined from the deconvoluted GPC peak.
The polymer composition of the present invention has a split of about 30% to about 70%,
preferably of from about 40% to about 60%, more preferably from about 45% to about 55%.

In the process, a high molecular weight catalyst is defined relative to a low molecular
15   weight catalyst. A high molecular weight catalyst refers to a catalyst which produces a polymer
with a high weight-average molecular weight M_{wH} from the monomers and any comonomers of
choice under a set of given polymerization conditions, whereas a low molecular weight catalyst
refers to a catalyst which produces a polymer with a low weight average molecular weight
M_{wL} from the same monomer and comonomers under substantially the same polymerization
20   conditions. Therefore, the terms "low molecular weight catalyst" and "high molecular weight
catalyst" used herein do not refer to the molecular weight of a catalyst; rather, they refer to a
catalyst's ability to make a polymer with a low or high molecular weight. The intrinsic
molecular weight differences in the polymer produced by the chosen high and low molecular
weight catalysts produces the "polymer split" of the composition.

25   Thus, a high molecular weight catalyst and a low molecular weight catalyst are
determined with reference to each other. One does not know whether a catalyst is a high
molecular weight catalyst or a low molecular weight catalyst until after another catalyst is also
selected. Therefore, the terms "high molecular weight" and "low molecular weight" used herein

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0 when referring to a catalyst are merely relative terms and do not encompass any absolute value with respect to the molecular weight of a polymer. After a pair of catalysts are selected, one can easily ascertain the high molecular weight catalyst by the following procedure: 1) select at least one monomer which can be polymerized by the chosen catalysts; 2) make a polymer from the selected monomer(s) in a single reactor containing one of the selected catalysts under pre-

5 selected polymerization conditions; 3) make another polymer from the same monomer(s) in a single reactor containing the other catalyst under substantially the same polymerization conditions; and 4) measure the molecular weight of the respective interpolymers. The catalyst that yields a higher M_w is the higher molecular weight catalyst. Conversely, the catalyst that yields a lower M_w is the lower molecular weight catalyst. Using this methodology, it is possible

10 to rank a plurality of catalysts based on the molecular weight of the polymers they can produce under substantially the same conditions. As such, one may select three, four, five, six, or more catalysts according to their molecular weight capability and use these catalysts simultaneously in a single polymerization reactor to produce polymers with tailored structures and properties.

Comonomer incorporation can be measured by many techniques that are known in the

15 art. One technique which may be employed is ^{13}C NMR spectroscopy, an example of which is described for the determination of comonomer content for ethylene/alpha-olefin copolymers in Randall (Journal of Macromolecular Science, Reviews in Macromolecular Chemistry and Physics, C29 (2 & 3), 201-317 (1989)), the disclosure of which is incorporated herein by reference. The basic procedure for determining the comonomer content of an olefin

20 interpolymer involves obtaining the ^{13}C NMR spectrum under conditions where the intensity of the peaks corresponding to the different carbons in the sample is directly proportional to the total number of contributing nuclei in the sample. Methods for ensuring this proportionality are known in the art and involve allowance for sufficient time for relaxation after a pulse, the use of gated-decoupling techniques, relaxation agents, and the like. The relative intensity of a peak or

25 group of peaks is obtained in practice from its computer-generated integral. After obtaining the spectrum and integrating the peaks, those peaks associated with the comonomer are assigned. This assignment can be made by reference to known spectra or literature, or by synthesis and analysis of model compounds, or by the use of isotopically labeled comonomer. The mole %

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0   comonomer can be determined by the ratio of the integrals corresponding to the number of moles of comonomer to the integrals corresponding to the number of moles of all of the monomers in the interpolymer, as described in Randall, for example.

The reactivity ratio of single site catalysts in general are obtained by known methods, for

5   example, as described in "Linear Method for Determining Monomer Reactivity Ratios in Copolymerization", M. Fineman and S.D. Ross, J. Polymer Science 5, 259 ('950) or "Copolymerization", F.R. Mayo and C. Walling, Chem. Rev. 46, 191 (1950) incorporated herein in its entirety by reference. For example, to determine reactivity ratio the most widely used copolymerization model is based on the following equations:

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$$M_i{}^* + M_i \xrightarrow{\;k_1\;} M_i{}^* \qquad (1)$$

$$M_i{}^* + M_2 \xrightarrow{\;k_{12}\;} M_2{}^* \qquad (2)$$

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$$M_2{}^* + M_i \xrightarrow{\;k_{21}\;} M_i{}^* \qquad (3)$$

$$M_2{}^* + M_2 \xrightarrow{\;k_{22}\;} M_{i2}{}^* \qquad (4)$$

20   where M_i refers to a monomer molecule which is arbitrarily designated as "I" where I= 1, 2; and $M_2{}^*$ refers to a growing polymer chain to which monomer I has most recently attached.

The k_{ij} values are the rate constants for the indicated reactions. For example, in ethylene/propylene copolymerization, k_{ij} represents the rate at which an ethylene unit inserts

25   into a growing polymer chain in which the previously inserted monomer unit was also ethylene. The reactivity ratios follow as $r_1 = k_{11} / k_{12}$ and $r_2 = k_{22}/k_{21}$ wherein k_{11}, k_{12}, k_{22} and k_{21} are the rate constants for ethylene (1) or propylene (2) addition to a catalyst site where the last polymerized monomer is an ethylene (k_{1x}) or propylene (k_{2x}).

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0   Because the change in r_1 with temperature may vary from catalyst to catalyst, it should be appreciated that the term "different comonomer incorporation" refers to catalysts which are compared at the same or substantially the same polymerization conditions, especially with regard to polymerization temperatures. Thus, a pair of catalysts may not possess "different comonomer incorporation" at a low polymerization temperature, but may possess "different comonomer

5   incorporation" at a higher temperature, and vice versa. For the purposes of this invention, "different comonomer incorporation" refers to catalysts, which are compared at the same or substantially the same polymerization temperature. Because it is also known that different cocatalysts or activators can have an effect on the amount of comonomer incorporation in an olefin copolymerization, it should be appreciated that "different comonomer incorporation"

10   refers to catalysts which are compared using the same or substantially the same cocatalyst(s) or activator(s). Thus, for the purposes of this invention, a test to determine whether or not two or more catalysts have "different comonomer incorporation" should be conducted with each catalyst using the same method of activation for each catalyst, and the test should be conducted at the same polymerization temperature, pressure, and monomer content (including comonomer

15   concentration) as is used in the instant inventive process when the individual catalysts are used together.

       When a low molecular weight catalyst with r_1^L and a high molecular weight catalyst with r_1^H are selected, the r_1 ratio, r_1^H / r_1^L, is another way to define the amount of comonomer incorporation by the low and high molecular weight catalysts. To have substantially similar or

20   the same comonomer incorporation in some embodiments of the invention, the ratio r_1^H / r_1^L, preferably should fall between about 0.03 to about 30, more preferably between about 0.05 to about 20, and most preferably between about 0.1 to about 10.

       Generally, a lower r_1 indicates a higher comonomer incorporation ability for the catalyst

25   (i.e., a higher tendency to make a homopolymer). Therefore, if one desires to make a copolymer with a minimal density split, it would be preferable to use at least two catalysts with substantially similar or identical r_1, on the other hand, when one desires to make a blend of homopolymers and copolymers with a significant density split, it would be preferable to employ at least two

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0   catalysts with substantially dissimilar r_1.

The high molecular weight catalysts and the low molecular weight catalysts are selected such that they have the ability to incorporate a different amount of comonomers in the polymer. In other words, under substantially the same conditions of temperature, pressure, and monomer content (including comonomer concentration), each catalyst incorporates a different mole

5   percentage of comonomers into the resulting interpolymer. One way to quantify "different" mole percentage of comonomer is as follows: were a the difference between the comonomer incorporation of the first catalyst and second catalyst is greater than or equal to 2 mole % (i.e., either 2 mol 5 More, or 2 mol, % less).

Preferably, for all of the ethylene homopolymers and interpolymers described

10   immediately above, at least two of the catalysts used in a single reactor have different comonomer incorporation, and the process used is a gas phase, slurry, or solution process. More preferably, for all of the ethylene homopolymers and interpolymers described immediately above, at least two of the catalysts used in a single reactor have different comonomer incorporation, and M_{wH}/M_{wL} is from about 1 to about 20.

15   Preferably, the process used is a continuous solution process, especially a continuous solution process wherein the polymer concentration in the reactor at steady state is at least 10% by weight of the reactor contents and the ethylene concentration is 3.5% or less by weight of the reactor contents.

Still more preferably, the process used is a continuous solution process wherein the

20   polymer concentration in the reactor at steady state is at least 18% by weight of the reactor contents and the ethylene concentration is 2.5% or less by weight of the reactor contents.

Most preferably, for all of the ethylene homopolymers and interpolymers described immediately above, at least two of the catalysts used in a single reactor have a different comonomer incorporation, and the process used is a continuous solution process wherein the

25   polymer concentration in the reactor at steady state is at least 20% by weight of the reactor contents and the ethylene concentration is 2.0% or less by weight of the reactor contents.

The catalysts used in the process of the present invention when used individually produce homogeneous ethylene/alpha-olefin interpolymers. The term "homogeneous interpolymer" is

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0   used herein to indicate a linear or substantially linear ethylene interpolymer prepared using a

constrained geometry or single site metallocene catalyst. By the term homogeneous, it is meant

that any comonomer is randomly distributed within a given interpolymer molecule and

substantially all of the interpolymer molecules have the same ethylene/comonomer ratio within

that interpolymer. The melting peak of homogeneous linear and substantially linear ethylene

5   polymers, as determined by differential scanning calorimetry ("DSC") will broaden as the

density decreases and/or as the number average molecular weight decreases.

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